

# M208

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## Errata

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**These errors have been spotted during the 19J presentation;  
updated on 12 August 2019**

### Book A

Page 6	Figure 4	In the caption ‘perpendicular’ should be replaced by ‘non-parallel’.
Page 90	Sol Ex A19(b)	The circle should have a dashed (not solid) line.
Page 96	Sol Ex A46(a)	The right-hand vertical bar is missing from $ \mathbf{v} $ .
page 128		In the definition box ‘the $x$ -axis’ should say ‘real axis’.
Page 139	Sol WEx A34	In the second (black) line the minus sign is missing, the equation should be $z^3 = -27$ .
Page 172	line –12	Replace 3 by 6 (twice) to get ‘...the HCF of 6 and 18 is 6, and 6 is not a factor of 4.’
Page 173	Sol WEx A44	The final solution should be $x = 4 + 2 \times 5 = 14$ .
Page 240	Proof of Theorem A11	In the middle of the page, three occurrences of ‘ $a$ and $b$ ’ should say ‘ $a$ and $n$ ’ (two say ‘ $a$ and $b$ are coprime’ and one says ‘ $a$ and $b$ are not coprime’).
Page 259	Sol WEx A75	In the third ‘thinks’, ‘integer’ should be replaced by ‘real number’ to get ‘Saying that a real number is of the form ...’
Page 265	E3	The elements should be real numbers not integers: ‘Let $x, y, z \in \mathbb{R} \dots$ ’
Page 307	Exercise A146	In Figure F, the 1 should be a 2 on the $y$ -axis.
Page 308	Figure 24(b)	The portion of this graph to the left of the local minimum should be coloured red.
Pages 336/337		$(1, 0)$ on the graphs of $\cosh$ and $\operatorname{sech}$ should be $(0, 1)$ .
Pages 353/356	Figures 51/53	Remove the blue angle $t$ marked on these two figures.
Page 368	Sol Ex A171	‘standard form’ should say ‘standard position’.

*Errata continue on the next page*

## Book B

Page 57	Proof of Theorem B9	Throughout, replace the reference to Theorem A9 by Theorem A11 (4 times).
Page 69	Figure 51(b)	The last element of the column border should be $t$ not $s$ .
Page 92	Sol Ex B3 (b)(iii)	The middle rectangle should have a horizontal double arrow in the middle.
Page 136		Replace the $a^0$ in the list of powers of 2 by $2^0$ .
Page 142	WEx B25	In the question and solution for part (b), add an $*$ to get the group $(\mathbb{R}^*, \times)$ .
Page 172	WEx B29	Add an $*$ to get the group $(\mathbb{R}^*, \times)$ .
Page 200	Sol Ex B77	Add an extra pair of brackets to the final expression to get $= (\phi(g))^3$ .
Page 210	Theorem B51	Should say ‘can be written’.
Page 251		In the first paragraph ‘vextex’ should say ‘vertex’.
Page 259		In the penultimate line ‘conjuate’ should say ‘conjugate’.
Page 284	Sol Ex B113	At the end of part (a) add ‘Here the reflection $(1\ 2)(4\ 3)$ is not written in the usual way: it can be rewritten as $(1\ 2)(3\ 4)$ ’.  Replace the paragraph in the middle of part (b) by ‘If we rewrite the permutations in the usual way then we obtain the following list of permutations’.  Also, in part (b), in the <i>second</i> list of rotations and reflections, rewrite $(1\ 4)(3\ 2)$ and $(1\ 3)(4\ 2)$ as $(1\ 4)(2\ 3)$ and $(1\ 3)(2\ 4)$ , respectively.
Page 289	Sol Ex B126(b)	Swap the labels 2 and 3 on first square.

## Additional exercises for Book B

Page 7	Sol XEx B4	At the bottom of the page, $r = b \circ 0$ should be $r = b \circ w$ .
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## Book C

Page 81	Figure 17	The middle blue box should contain $a_{1j}A_{1j}$ not $a_{1j}A_{ij}$ .
Page 88	Summary	Delete ‘ableian’ from the last line of the paragraph to get ‘... forms a group under matrix multiplication.’.
Page 219	Strategy C15	None of the $a_{ij}$ in step 2. should be bold.
Page 229	Proof of Theorem C40	In the middle of the page, replace the subscript $E$ on the final column vector by $F$ .
Page 268	Sol Ex C82	The bottom half of the rectangle should be shaded, not the top half.
Page 270	Sol Ex C87	In the last line replace $t$ by $i_V$ .
Page 312	Figure 7	Replace the label $t(\mathbf{v}_E)$ in the top right oval by $t(\mathbf{v})_E$ .
Page 336		In the top line, replace Theorem A21 by Theorem A18.
Pages 342/343	Figures 18/19	On the third part replace the equals sign by a comma to get $x''$ , $x'$ and $y''$ , $y'$ , respectively.
Page 350		Towards the end of the blue box, replace ‘nineteenth century’ by ‘eighteenth century’.

## Book D

Page 45	Sol WEx D18	In the first line on this page replace $0 < M' < 1$ by $M' < 1$ .
Page 58	Sol Ex D20(b)	In the eighth line of this solution replace $0 < M' < 1$ by $M' < 1$ .
Page 120	Sol Ex D23(d)	Swap 1 and $-1$ on the $y$ -axis.
Page 144	Theorem D29	The Monotone Convergence Theorem is Theorem D22 (there is no Theorem D29).
Page 154	Above the Ratio Test	Insert ‘In the following theorem we allow the letter $l$ to denote either a real number or the symbol $\infty$ . (As earlier, do not let this use of the symbol $\infty$ tempt you to think that $\infty$ is a real number.)’
Page 170	Below Figure 9	In the first sentence replace ‘all real numbers $x$ ’ by ‘all real numbers $x \geq 0$ ’ and ‘type (a)’ by ‘type (d)’.
Page 210	Ex D61	Replace $[0, \infty)$ by $\mathbb{R}$ .
Page 253	Sol Ex D61	In the first sentence, replace $[0, \infty)$ by $\mathbb{R}$ .

*Errata continue on the next page*

## Book E

Page 7	Line just above Ex E2	Replace ' $= \text{frac}(1.8) = 0.8$ ' by ' $= \text{frac}(1.6) = 0.6$ '.
Page 60	WEx E13	In the second line, delete the comma in ' $\langle(1, 2)\rangle$ '.
Page 157	Ex E87	In the table, in the column headed 'Subgroup', swap the contents of the second row, namely $\{e, a, b\}$ , with the contents of the third row, namely $\{e, r\}$ , $\{e, s\}$ , $\{e, t\}$ .
Page 244	Figure 20	Delete the element 0 from both the domain and codomain ovals, along with the the arrow from 0 to 0.
Page 250	Proof of Theorem E51	In the third line, change Theorem E20 to Theorem E33.
Page 253	Proof of Theorem E53	In the block of displayed equations just over halfway through the proof, in the second line, change Theorem E1 to Theorem E14.
Page 267	Proof of Theorem E55	In the block of displayed equations about a quarter of the way down the page, in the first line, change Theorem E1 to Theorem E14.
Page 272	Ex E132(b)	In the hint, change Exercise E39 to Exercise E87.
Page 274	Line -6	Change Theorem E1 to Theorem E14.
Page 275	Line -9	Change Theorem E1 to Theorem E14.
Page 280	Sol Ex E106	In each of the two lines of the form $\phi : (\mathbb{Z}_4, +_4) \longrightarrow (\{0, 2, 4, 6\}, +_4)$ , change the second $+_4$ to $+_8$ .

## Book F

Page 117	Sol Ex F32(a)	At the end of the third sentence, replace $x = 0$ by $x = \pi$ .
Page 118	Sol Ex F32(b)	On the fourth line of page 118 replace $g(x)$ by $g'(x)$ .
Page 203	Definition box	In the final line, replace $(x - a)^n$ by $(x - a)^k$ .
Page 256	Sol Ex F65(a)	In each of the four sums, replace $n = 0$ by $n = 1$ .

## Handbook

Page 85	Item 11	After the Ratio Test, insert 'The letter $l$ denotes either a real number or the symbol $\infty$ .'
Page 117	Item 10	Replace the second bullet point with <ul style="list-style-type: none"><li>• <math>f(x) = x^\alpha \quad (x \in \mathbb{R}^+), \quad \text{where } \alpha \in \mathbb{R}</math></li></ul>
Page 125	Item 2	In the sum, replace $(x - a)^n$ by $(x - a)^k$ .

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